CURRENT STATUS OF THE CLAIMS

In the Claims

The following is a marked-up version of the claims with the language that is underlined ("___") being added and the language that contains strikethrough ("—") being deleted:

1. (Twice Amended) A monolithic waveguide comprising:

a planar waveguide core disposed in a fixed position and flush with a lower cladding;

an air-gap cladding engaging a portion of the waveguide core; and

an overcoat layer engaging a portion of the air-gap cladding and engaging the lower cladding.

2. (Previously Amended) The waveguide of claim 1, wherein the waveguide core includes at least one coupling element, wherein the air-gap cladding engages a portion of the at least one coupling element.

3. (Original) The waveguide of claim 1, further comprising:

at least one coupling element disposed adjacent to the waveguide core.

4. (Twice Amended) The waveguide of claim 1, further comprising:

a second waveguide cladding adjacent to the waveguide core, wherein the air-gap cladding engages a portion of the second waveguide cladding.

5. (Twice Amended) The waveguide of claim 1, further comprising:

a second waveguide core, wherein the air-gap cladding engages a portion of the second waveguide core.

6. (Twice Amended) A device, comprising:

a monolithic waveguide having a planar waveguide core disposed in a fixed position and flush with a lower cladding, an air-gap cladding engaging a portion of waveguide core, and an overcoat layer engaging a portion of the air-gap cladding, wherein the overcoat layer engages the lower cladding.

7. (Original) The device of claim 6, wherein the waveguide is included in a microelectronic device.

8. (Original) The device of claim 6, wherein the waveguide is included in an integrated optical device.

9. (Original) The device of claim 6, wherein the waveguide is included in a photonic crystal device.

10-13. (Canceled)

14. (Previously Added) The waveguide of claim 1, wherein the overcoat layer is selected from silicon dioxide, silicon nitride, polyimides, polynorbornenes, epoxides, polyarylenes ethers, and parylenes.

15. (Previously Added) The waveguide of claim 1, wherein the overcoat layer is selected from polyimides, polynorbornenes, epoxides, polyarylenes ethers, and parylenes.

16. (Previously Added) The waveguide of claim 1, wherein the overcoat layer is selected from polyimides and polynorbornenes.

17. (Previously Added) The device of claim 6, wherein the overcoat layer is selected from silicon dioxide, silicon nitride, polyimides, polynorbornenes, epoxides, polyarylenes ethers, and parylenes.

18. (Previously Added) The device of claim 6, wherein the overcoat layer is selected from polyimides, polynorbornenes, epoxides, polyarylenes ethers, and parylenes.

19. (Previously Added) The device of claim 6, wherein the overcoat layer is selected from polyimides and polynorbornenes.

20-27. (Withdrawn)